

Professional Digital Two-Way Radio System

MOTO^{TRBO}™ XPR™ 4500 / XPR™ 4550

Display Mobile

User Guide



Declaration of Conformity

This declaration is applicable to your radio **only** if your radio is labeled with the FCC logo shown below.

DECLARATION OF CONFORMITY

Per FCC CFR 47 Part 2 Section 2.1077(a)



Responsible Party

Name: Motorola, Inc.

Address: 1301 East Algonquin Road, Schaumburg, IL 60196-1078, U.S.A.

Phone Number: 1-888-567-7347

Hereby declares that the product:

Model Name: **XPR 4500/XPR 4550**

conforms to the following regulations:

FCC Part 15, subpart B, section 15.107(a), 15.107(d) and section 15.109(a)

Class B Digital Device

As a personal computer peripheral, this device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Contents

This User Guide contains all the information you need to use the MOTOTRBO XPR Series Digital Mobile Radios.

Declaration of Conformity	i
Important Safety Information	vii
Product Safety and RF Exposure Compliance	vii
Computer Software Copyrights	viii
Getting Started	1
How to Use This User Guide	1
What Your Dealer/System Administrator Can Tell You	1
Powering Up the Radio	2
Adjusting the Volume	2
Identifying Radio Controls	3
Radio Controls You Will Be Using	3
Programmable Buttons	4
Assignable Radio Functions	4
Assignable Settings/Utility Functions	5
Accessing the Preprogrammed Functions	5
Push-To-Talk (PTT) Button	6
Switching Between Analog and Digital Mode	6

Identifying Status Indicators	7
Display Icons	7
Call Icons	8
LED Indicators	8
Audio Tones	9
Receiving and Making Calls	9
Selecting a Zone	9
Selecting a Radio Channel, Subscriber Alias or ID, or Group Alias or ID	10
Receiving and Responding to a Voice Call	10
Receiving and Responding to a Group Call	10
Receiving and Responding to a Private Call	11
Receiving an All Call	12
Making a Voice Call	12
Making a Voice Call with the Channel Rocker	12
Making a Group Call	12
Making a Private Call	13
Making an All Call	13
Making a Group or Private Call with the One Touch Call Button	14
Talkaround	14
Permanent Monitor	15

Advanced Features	15
Radio Check	15
Sending a Radio Check	16
Remote Monitor	17
Initiating Remote Monitor	17
Scan Lists	18
Viewing an Entry in the Scan List	18
Editing the Scan List	19
Adding a New Entry to the Scan List	19
Deleting an Entry from the Scan List	19
Setting and Editing Priority for an Entry in the Scan List	20
Scan	20
Starting and Stopping Scan	21
Responding to a Transmission During a Scan	21
Deleting a Nuisance Channel	22
Restoring a Nuisance Channel	22
Contacts Settings	23
Making a Group Call from Contacts	23
Making a Private Call from Contacts	23
Call Indicator Settings	24
Activating and Deactivating Call Ringers for Private Calls	24

Activating and Deactivating Call Ringers for Text Messaging	25
Assigning Ring Styles	25
Escalating Alarm Tone Volume	26
Call Log Features	26
Viewing Recent Calls	26
Missed Call Screen	27
Deleting a Call from a Call List	27
Call Alert Operation	28
Receiving and Acknowledging a Call Alert	28
Making a Call Alert from the Contacts List	28
Making a Call Alert with the One Touch Call Button	29
Emergency Operation	29
Receiving an Emergency Alarm	30
Responding to an Emergency Alarm	30
Sending an Emergency Alarm	31
Sending an Emergency Alarm with Call	31
Sending an Emergency Alarm with Voice to Follow	32
Reinitiating an Emergency Mode	32
Exiting Emergency Mode	33
Text Messaging Features	33

Sending a Quick Text Message	33	Accessing General Radio Information	43
Sending a Quick Text Message with the One Touch Call Button	34	Checking the Radio ID	43
Receiving a Text Message	34	Checking the Firmware Version	44
Reading a Text Message	34	Checking the Codeplug Version	44
Managing Text Messages	35	Keypad Microphone Features	44
Viewing a Text Message from the Inbox	35	Using the Keypad	45
Replying to a Text Message with Quick Text	35	Turning Keypad Tones On or Off	46
Deleting a Text Message from the Inbox	36	Additional Advanced Features	46
Deleting All Text Messages from the Inbox	37	Initiating a Radio Check by Manual Dial	46
Security	37	Initiating Remote Monitor by Manual Dial	47
Radio Disable	37	Making a Private Call by Manual Dial	48
Radio Enable	38	Making a Private Call by Alias Search	48
Utilities	39	Storing an Alias or ID from the Missed Call List	49
Setting the Squelch Level	39	Sending a Call Alert by Manual Dial	49
Setting the Power Level	40	Text Messaging	50
Controlling the Display Backlight	40	Writing and Sending a Text Message	50
Turning Horns/Lights On or Off	41	Replying to Text Messages from the Inbox	51
Turning Radio Tones/Alerts On or Off	41	Editing a Quick Text Message	52
Turning the Talk Permit Tone On or Off	42	Security	53
Turning the LED Indicators On or Off	42	Radio Disable via Manual Dial	53
Turning the Introduction Screen On or Off	43	Radio Enable via Manual Dial	53

Accessories	54
Antennas	54
Audio	55
Cables	55
Desktop Accessories	55
Mounting Kits	56

Speakers	56
Miscellaneous Accessories	56
Limited Warranty	57
Notes	60

ATTENTION!

This radio is restricted to occupational use only to satisfy FCC RF energy exposure requirements. Before using this product, read the RF energy awareness information and operating instructions in the Product Safety and RF Exposure booklet enclosed with your radio (Motorola Publication part number 6881095C99_) to ensure compliance with RF energy exposure limits.

For a list of Motorola-approved antennas and other accessories, visit the following website:

<http://www.motorola.com/governmentandenterprise>

Important Safety Information

Product Safety and RF Exposure Compliance



Caution

Before using this product, read the operating instructions for safe usage contained in the Product Safety and RF Exposure booklet enclosed with your radio.

Computer Software Copyrights

The Motorola products described in this manual may include copyrighted Motorola computer programs stored in semiconductor memories or other media. Laws in the United States and other countries preserve for Motorola certain exclusive rights for copyrighted computer programs including, but not limited to, the exclusive right to copy or reproduce in any form the copyrighted computer program. Accordingly, any copyrighted Motorola computer programs contained in the Motorola products described in this manual may not be copied, reproduced, modified, reverse-engineered, or distributed in any manner without the express written permission of Motorola. Furthermore, the purchase of Motorola products shall not be deemed to grant either directly or by implication, estoppel, or otherwise, any license under the copyrights, patents or patent applications of Motorola, except for the normal non-exclusive license to use that arises by operation of law in the sale of a product.

The AMBE+2™ voice coding Technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc.

This voice coding Technology is licensed solely for use within this Communications Equipment. The user of this Technology is explicitly prohibited from attempting to decompile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into a human-readable form.

U.S. Pat. Nos. #5,870,405, #5,826,222, #5,754,974, #5,701,390, #5,715,365, #5,649,050, #5,630,011, #5,581,656, #5,517,511, #5,491,772, #5,247,579, #5,226,084 and #5,195,166.

Getting Started

Take a moment to review the following:

How to Use This User Guide	page 1
What Your Dealer/System Administrator Can Tell You	page 1
Powering Up the Radio	page 2
Adjusting the Volume	page 2

■ How to Use This User Guide

This User Guide covers the basic operation of the MOTOTRBO Mobiles.

However, your dealer or system administrator may have customized your radio for your specific needs. Check with your dealer or system administrator for more information.

Throughout this publication, two icons are used to differentiate Analog mode and Digital mode only features:



Indicates an Analog Mode only feature.



Indicates a Digital Mode only feature.

For features that are available in both Analog and Digital modes, no icon is shown.

■ What Your Dealer/System Administrator Can Tell You

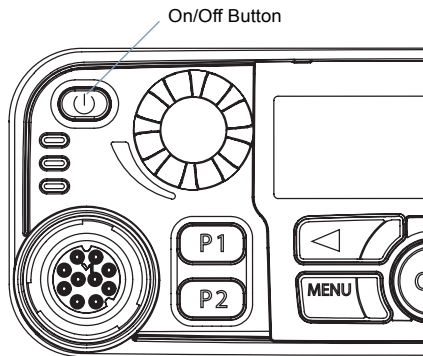
You can consult your dealer or system administrator about the following:

- Is your radio programmed with any preset conventional channels?
- Which buttons have been programmed to access other features?
- What optional accessories may suit your needs?

■ Powering Up the Radio

Press the On/Off Button briefly. You see *Powering Up* on the radio's display.

The green LED blinks and the Home screen lights up if the backlight setting is set to turn on automatically.



NOTE: The Home screen does not light up during a power up if the LED indicators are disabled (see **Turning the LED Indicators On or Off** on page 42).

A brief tone sounds, indicating that the power up test is successful.

NOTE: There is no power up tone if the radio tones/alerts function is disabled (see **Turning Radio Tones/Alerts On or Off** on page 41).

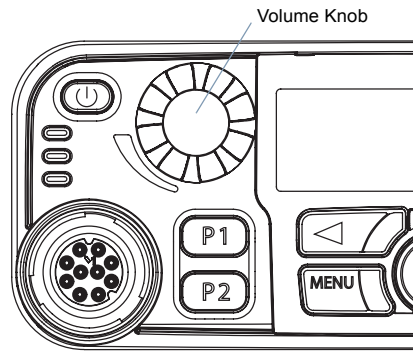
If your radio does not power up, contact your dealer.

*To turn off the radio, press and hold the On/Off Button until you see *Powering Down* on the radio's display.*

■ Adjusting the Volume

To increase the volume, turn the **Volume Knob** clockwise.

To decrease the volume, turn this knob counterclockwise.

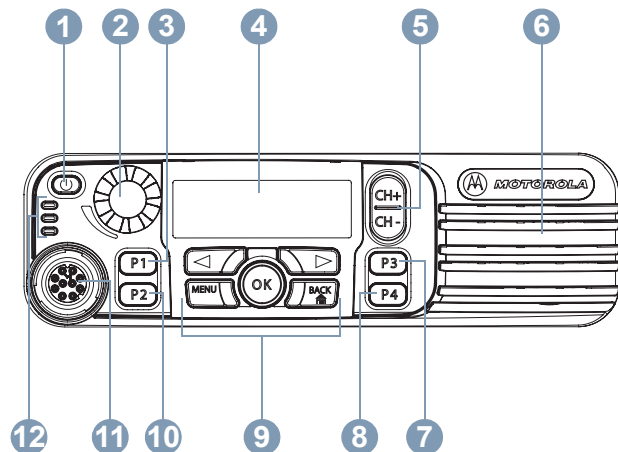


Identifying Radio Controls

Take a moment to review the following:

Radio Controls You Will Be Using	page 3
Programmable Buttons	page 4
Accessing the Preprogrammed Functions.	page 5
Push-To-Talk (PTT) Button	page 6
Switching Between Analog and Digital Mode	page 6

■ Radio Controls You Will Be Using



- 1 On/Off Button
- 2 Volume Knob
- 3 Front Button P1*
- 4 Display
- 5 Channel Rocker
- 6 Speaker
- 7 Front Button P3*
- 8 Front Button P4*
- 9 Menu Navigation Buttons
- 10 Front Button P2*
- 11 Accessory Connector
- 12 LED Indicators

** These buttons are programmable.*

■ Programmable Buttons

Your dealer can program the programmable buttons as shortcuts to radio functions or preset channels/groups depending on the duration of a button press:

- Press – Pressing and releasing rapidly.
- Long press – Pressing and holding for the preprogrammed duration (between 0.25 seconds and 3.75 seconds).
- Hold down – Keeping the button pressed.

📄 Assignable Radio Functions

Contacts – Provides direct access to the Contacts list.

Emergency – Depending on the programming, initiates or cancels an Emergency Alarm or Call.

Manual Dial 📞 – Initiates a call by keying in any subscriber ID. Only available with a keypad microphone.

Nuisance Channel Delete – Temporarily removes an unwanted channel, except for the Selected Channel, from the scan list. The Selected Channel refers to the user's selected zone/channel combination from which scan is initiated.

One Touch Call 📞 – Directly initiates a predefined Group or Private Call, a Call Alert or a Quick Text message.

Permanent Monitor – Monitors a selected channel for all radio traffic until function is disabled.

Radio Check 📞 – Determines if a radio is active in a system.

Radio Enable 📞 – Allows a target radio to be remotely enabled.

Radio Disable 📞 – Allows a target radio to be remotely disabled.

Remote Monitor 📞 – Turns on the microphone of a target radio without it giving any indicators.

Repeater/Talkaround – Toggles between using a repeater and communicating directly with another radio.

Scan – Toggles scan on or off.

Telemetry Control 📞 – Controls the Output Pin on a local or remote radio.

Text Messaging 📞 – Selects the Text Message menu.

Zone – Allows selection from a list of zones.

Assignable Settings/Utility Functions

All Tones/Alerts – Toggles all tones on or off.

Backlight – Controls the backlight intensity.

Horns/Lights – Toggles horns and lights feature on or off.

Power Level – Toggles transmit power level between high and low.

Squelch  – Toggles squelch level between normal and tight.

Accessing the Preprogrammed Functions

You can access various radio functions through one of the following ways:

- A short or long press of the relevant programmable buttons.

OR



- Use the Menu Navigation Buttons as follows:

- 1 To access the menu, press the  button. Press the appropriate **Menu Scroll** button ( or ) to access the menu functions.
- 2 To select a function or enter a sub-menu, press the  button.
- 3 To go back one menu level, or to return to the previous screen, press the  button. Long press the  button to return to the Home screen.

*The Menu Navigation Buttons are also available on a keypad microphone (see **Using the Keypad** on page 45).*

NOTE: Your radio automatically exits the menu after a period of inactivity and returns to your Home screen.

■ Push-To-Talk (PTT) Button

The **PTT** button on the side of the microphone serves two basic purposes:

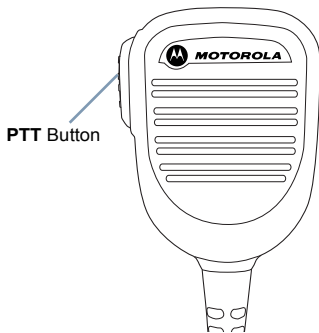
- While a call is in progress, the **PTT** button allows the radio to transmit to other radios in the call.

Press and hold down **PTT** button to talk. Release the **PTT** button to listen.

The microphone is activated when the **PTT** button is pressed.

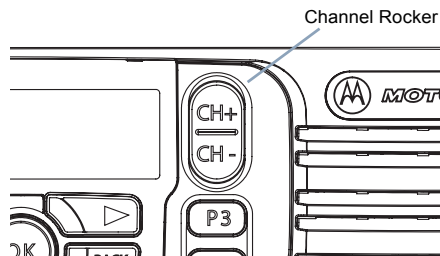
- While a call is not in progress, the **PTT** button is used to make a new call (see **Making a Voice Call** on page 12).

- 🔊 If the **Talk Permit Tone** is enabled (see **Turning the Talk Permit Tone On or Off** on page 42), wait until the short alert tone ends before talking.



■ Switching Between Analog and Digital Mode

Each channel in your radio can be configured as an analog channel or a digital channel. Use the **Channel Rocker** to switch between an analog or a digital channel.



When switching from digital to analog mode, certain features are unavailable. Icons for the digital features (such as Messages) reflect this change by appearing "grayed out". Disabled features are hidden in the menu.

Your radio also has features available in both analog and digital mode. However, the minor differences in the way each feature works does **NOT** affect the performance of your radio.

NOTE: Your radio also switches between digital and analog modes during a dual mode scan (see **Scan** on page 20).

Identifying Status Indicators

Your radio indicates its operational status through the following:

Display Icons	page 7
Call Icons	page 8
LED Indicators	page 8
Audio Tones	page 9

■ Display Icons

The liquid crystal display (LCD) of your radio shows the radio status, text entries, and menu entries.



The following are the icons that appear on the radio's display.



Received Signal Strength Indicator (RSSI)

The number of bars displayed represents the radio signal strength. Four bars indicates the strongest signal. This icon is only displayed while receiving.

Power Level

Radio is set at Low power.



Radio is set at High power.

Emergency

Radio is in Emergency mode.



Monitor

Selected channel is being monitored.



Scan

Scan feature is activated.



Priority Scan

Radio detects activity on channel/group designated as Priority 1 (if • is blinking) or Priority 2 (if • is steady).



Talkaround

In the absence of a repeater, radio is currently configured for direct radio to radio communication.



Unread Message

User has unread message(s) in the Inbox.



Inbox Full

User's Inbox is full.





Tones Disable

Tones are turned off.



GPS Available

The GPS feature is enabled. The icon stays lit when a position fix is available.



GPS Not Available/Out of Range

The GPS feature is enabled but is not receiving data from the satellite.

Call Icons

The following icons appear on the radio's display during a call. These icons also appear in the Contacts list to indicate alias or ID type.



Private Call

Indicates a Private Call in progress. In the Contacts list, it indicates a subscriber alias (name) or ID (number).



Group Call/All Call

Indicates a Group Call or All Call in progress. In the Contacts list, it indicates a group alias (name) or ID (number).

LED Indicators

LED indicators show the operational status of your radio.

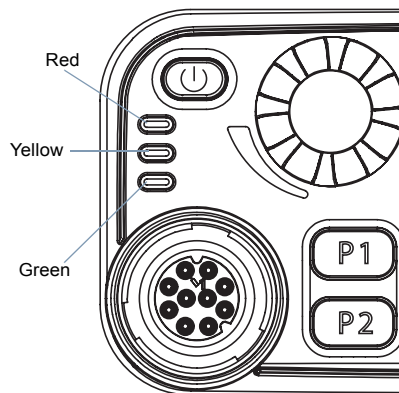
Blinking red – Radio is receiving an Emergency transmission or has failed the self-test upon powering up.

Solid yellow – Radio is receiving a request for a Private Call, or monitoring a channel.

Blinking yellow – Radio is scanning for activity or receiving a Call Alert.

Solid green – Radio is transmitting.

Blinking green – Radio is powering up or receiving a call.



■ Audio Tones

Alert tones provide you with audible indications of the radio's status or the radio's response to data received.

Continuous Tone	A monotone sound. Sounds continuously until termination.
	
Periodic Tone	Sounds periodically depending on the duration set by the radio. Tone starts, stops, and repeats itself.
	
Repetitive Tone	A single tone that repeats itself until it is terminated by the user.
	
Momentary Tone	Sounds only once for a short period of time defined by the radio.
	

Receiving and Making Calls

Once you understand how your MOTOTRBO Mobile is configured, you are ready to use your radio.

Use this navigation guide to familiarize yourself with the basic Call features:

Selecting a Zone	page 9
Selecting a Radio Channel, Subscriber Alias or ID, or Group Alias or ID	page 10
Receiving and Responding to a Voice Call	page 10
Making a Voice Call	page 12
Talkaround	page 14
Permanent Monitor.	page 15

■ Selecting a Zone

A zone is a group of channels. Your radio supports up to a maximum of 50 zones.

Use the following procedure to select a zone.

Procedure:

Press the preprogrammed **Zone** button and proceed to step 3.

OR

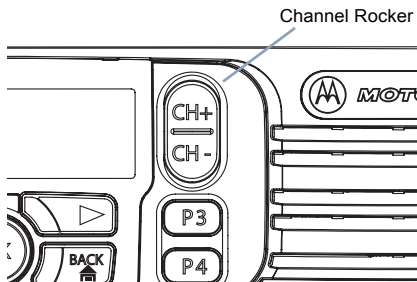
Follow the procedure below.

- 1  to access the menu.
- 2 ◀ or ▶ to **Zone** and press  to select.
- 3 The current zone is displayed and indicated by a ✓.
- 4 ◀ or ▶ to the required zone and press  to select.
- 5 The display shows <Zone> Selected momentarily and returns to the selected zone screen.

■ Selecting a Radio Channel, Subscriber Alias or ID, or Group Alias or ID

Procedure:

Once the required zone is displayed (if you have multiple zones in your radio), press the Channel Rocker to select the channel, subscriber alias or ID, or group alias or ID.

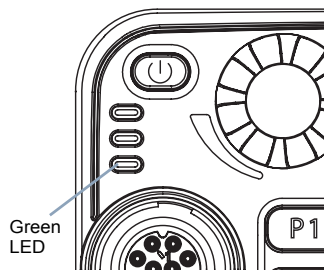


Channel Rocker

■ Receiving and Responding to a Voice Call

Once the channel, subscriber alias or ID, or group alias or ID is displayed, you can proceed to receive and respond to calls.

The green LED lights up while the radio is transmitting and blinks when the radio is receiving.



Green LED

■ Receiving and Responding to a Group Call

To receive a call from a group of users, your radio must be configured as part of that group.

Procedure:

When you receive a Group Call (while on the Home screen):

- 1 The green LED blinks.
- 2 The first line of the display shows the caller alias or ID, and the RSSI icon. The second line displays the group alias or ID, and the Group Call icon (in Digital mode only).
- 3 Press the **PTT** button to respond to the call. The green LED lights up.

- 4 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 5 Release the **PTT** button to listen.
- 6 If there is no voice activity for a predetermined period of time, the call ends.

See **Making a Group Call** on page 12 for details on making a Group Call.

NOTE: If the radio receives a Group Call while not on the Home screen, it remains on its current screen prior to answering the call.

Long press the  button to go to Home screen to view the caller alias before replying.

Receiving and Responding to a Private Call

A Private Call is a call from an individual radio to another individual radio.

There are two types of Private Calls. The first type, where a radio presence check is performed prior to setting up the call, while the other sets up the call immediately.

When your radio is checked, the yellow LED lights up momentarily. Only one of these call types can be programmed to your radio by your dealer.

Procedure:

When you receive a Private Call:

- 1 Depending on how your radio is programmed:
The yellow LED lights up momentarily. Then, the green LED blinks.
OR
The green LED blinks.
- 2 The first line of the display shows the subscriber alias or ID, and the RSSI icon. The second line displays `Private Call` and the Private Call icon.
- 3 Press the **PTT** button to respond to the call. The green LED lights up.
- 4 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 5 Release the **PTT** button to listen.
- 6 If there is no voice activity for a predetermined period of time, the call ends.
- 7 You hear a short tone. The display shows `Call Ended`.

See **Making a Private Call** on page 13 for details on making a Private Call.

Receiving an All Call

An All Call is a call from an individual radio to every radio on the channel. It is used to make important announcements requiring the user's full attention.

Procedure:

When you receive an All Call:

- 1 A tone sounds and the green LED blinks.
- 2 The first line of the display shows the caller alias, and the RSSI icon. The second line displays All Call and the All Call icon.
- 3 Once the All Call ends, the radio returns to the previous screen before receiving the call.

You cannot respond to an All Call.

See **Making an All Call** on page 13 for details on making an All Call.

NOTE: The radio stops receiving the All Call if you switch to a different channel while receiving the call. During an All Call, you will **not** be able to continue with any menu navigation or editing until the call ends.

Making a Voice Call

You can select a channel, subscriber alias or ID, or group alias or ID by using:

- The Channel Rocker
- A preprogrammed **One Touch Call** button 
- The Contacts list (see **Contacts Settings** on page 23)
- Manual Dial (via Contacts) – This method is for Private Calls only and is dialed using a keypad microphone (see **Making a Private Call by Manual Dial** on page 48) 

Making a Voice Call with the Channel Rocker

Making a Group Call

To make a call to a group of users, your radio must be configured as part of that group.

Procedure:

- 1 Press the Channel Rocker to select the channel with the active group alias or ID.
- 2 Press the **PTT** button to make the call. The green LED lights up. The display shows the group alias or ID, and the Group Call icon.

- 3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 4 Release the **PTT** button to listen. When the target radio responds, the green LED blinks. You see the Group Call icon, the group alias or ID, and transmitting radio alias or ID on your display.
- 5 If there is no voice activity for a predetermined period of time, the call ends.
- 6 Radio returns to the previous screen you were on prior to receiving the call.

*You can also make a Group Call via Contacts (see **Making a Group Call from Contacts** on page 23).*

Making a Private Call

Procedure:

- 1 Press the Channel Rocker to select the channel with the active subscriber alias or ID.
- 2 Press the **PTT** button to make the call. The green LED lights up. The first line displays the subscriber alias or ID. The second line displays *Private Call* and the Private Call icon.
- 3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

- 4 Release the **PTT** button to listen. When the target radio responds, the green LED blinks.
- 5 If there is no voice activity for a predetermined period of time, the call ends.
- 6 You hear a short tone. The display shows *Call Ended*.

*You can also make a Private Call via Contacts (see **Making a Private Call from Contacts** on page 23), manually dial a Private Call (see **Making a Private Call by Manual Dial** on page 48) or perform a quick alphanumeric search for the required target alias via a keypad entry (see **Making a Private Call by Alias Search** on page 48).*

Making an All Call

This feature allows you to transmit to all users on the channel. Your radio must be programmed to allow you to use this feature.

Procedure:

- 1 Press the Channel Rocker to select the channel with the active All Call group alias or ID.
- 2 Press the **PTT** button to make the call. The green LED lights up. The display shows the All Call group alias or ID, and the All Call icon.
- 3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

Users on the channel cannot respond to an All Call.

Making a Group or Private Call with the One Touch Call Button

The One Touch Call feature allows you to make a Group or Private Call to a predefined alias or ID easily. This feature can be assigned to a short or long programmable button press.

You can **ONLY** have one alias or ID assigned to a **One Touch Call** button. Your radio can have multiple **One Touch Call** buttons programmed.

Procedure:

- 1 Press the preprogrammed **One Touch Call** button to make a Group or Private Call to the predefined alias or ID.
- 2 Press the **PTT** button to make the call. The green LED lights up. The display shows the group/subscriber alias or ID, and the Group/Private Call icon.
- 3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 4 Release the **PTT** button to listen. When the target radio responds, the green LED blinks.
- 5 If there is no voice activity for a predetermined period of time, the call ends.
- 6 Radio returns to the screen you were on prior to receiving the call.

For a Private Call, you hear a short tone when the call ends.

Talkaround

You can continue to communicate when your repeater is not operating, or when your radio is out of the repeater's range but within talking range of other radios. This is called "talkaround".

Procedure:

Press the preprogrammed **Repeater/Talkaround** button to toggle between talkaround and repeater modes.

OR

Follow the procedure below.

- 1  to access the menu.
- 2  or  to Utilities and press  to select.
- 3  or  to Radio Settings and press  to select.
- 4  or  to Talkaround and press  to select.
- 5 You see Turn On if the radio is currently in Repeater mode.
OR
You see Turn Off if the radio is currently in Talkaround mode.
- 6 Press  to select.
- 7 The display shows Talkaround On.
OR
The display shows Talkaround Off.
- 8 The screen automatically returns to the previous menu.

The Talkaround setting is retained even after powering down.

■ Permanent Monitor

Use the Permanent Monitor feature to continuously monitor a selected channel for activity.

Procedure:

- 1 Press the preprogrammed **Permanent Monitor** button.
- 2 Radio sounds an alert tone, the yellow LED lights up, and the display shows `Permanent Monitor On`. The monitor icon appears on the display.
- 3 Press the preprogrammed **Permanent Monitor** button to exit Permanent Monitor mode.
- 4 Radio sounds an alert tone, the yellow LED turns off, and display shows `Permanent Monitor Off`.

Advanced Features

Use this navigation guide to learn more about advanced features available with your radio:

Radio Check	page 15
Remote Monitor	page 17
Scan Lists	page 18
Scan	page 20
Contacts Settings	page 23
Call Indicator Settings	page 24
Call Log Features	page 26
Call Alert Operation	page 28
Emergency Operation	page 29
Text Messaging Features	page 33
Security	page 37
Utilities	page 39

■ Radio Check

If enabled, this feature allows you to determine if another radio is active in a system without disturbing the user of that radio. No audible or visual notification is shown on the target radio.

This feature is only applicable for subscriber aliases or IDs.

Sending a Radio Check

Procedure:

Using the preprogrammed **Radio Check** button.

- 1 Press the preprogrammed **Radio Check** button.
- 2 ◀ or ▶ to the required subscriber alias or ID and press  to select.
- 3 The display shows **Radio Check: <Subscriber Alias or ID>**, indicating that Radio Check is in progress. The green LED lights up.
- 4 Wait for acknowledgement.
- 5 If the target radio is active in the system, a tone sounds and the display briefly shows **Target Radio Available**.
OR
If the target radio is not active in the system, a tone sounds and the display briefly shows **Target Radio Not Available**.
- 6 Radio returns to the subscriber alias or ID screen.

OR

Procedure:

Using the menu.

- 1  to access the menu.
- 2 ◀ or ▶ to **Contacts** and press  to select.

- 3 ◀ or ▶ to the required subscriber alias or ID and press  to select.
- 4 ◀ or ▶ to **Radio Check** and press  to select.
- 5 The display shows **Radio Check: <Subscriber Alias or ID>**, indicating that Radio Check is in progress. The green LED lights up.
- 6 Wait for acknowledgement.
- 7 If the target radio is active in the system, a tone sounds and the display briefly shows **Target Radio Available**.
OR
If the target radio is not active in the system, a tone sounds and the display briefly shows **Target Radio Not Available**.
- 8 Radio returns to the subscriber alias or ID screen.

If the  button is pressed when the radio is waiting for acknowledgement, a tone sounds, and the radio terminates all retries and exits Radio Check mode.

You can also initiate Radio Check via manual dial (see **Initiating a Radio Check by Manual Dial** on page 46).

■ Remote Monitor

Use the Remote Monitor feature to turn on the microphone of a target radio (subscriber IDs only). No audible or visual indication is given to the target radio. You can use this feature to monitor, remotely, any audible activity surrounding the target radio.

Your radio must be programmed to allow you to use this feature.

Initiating Remote Monitor

Procedure:

Using the preprogrammed **Remote Monitor** button.

- 1 Press the preprogrammed **Remote Monitor** button.
- 2 ◀ or ▶ to the required subscriber alias or ID and press  to select.
- 3 Radio sounds an alert tone and the green LED blinks.
- 4 Wait for acknowledgment.
- 5 The display shows Remote Monitor Successful.

OR

The display shows Remote Monitor Failed.

- 6 If successful:

The radio starts receiving audio from the monitored radio for a preprogrammed duration.

Once the timer expires, the radio sounds an alert tone and the green LED turns off. The display shows Remote Monitor Ended.

OR

If unsuccessful:

The radio repeats the attempt until the preprogrammed number of tries expires.

OR

Procedure:

Using the menu.

- 1  to access the menu.
- 2 ◀ or ▶ to **Contacts** and press  to select.
- 3 ◀ or ▶ to the required subscriber alias or ID and press  to select.
- 4 ◀ or ▶ to **Remote Mon.** and press  to select.
- 5 Radio sounds an alert tone and the green LED blinks.
- 6 Wait for acknowledgment.

- 7 The display shows `Remote Monitor Successful`.
OR
 The display shows `Remote Monitor Failed`.
-
- 8 If successful:
 The radio starts receiving audio from the monitored radio for a preprogrammed duration.
 Once the timer expires, the radio sounds an alert tone and the green LED turns off. The display shows `Remote Monitor Ended`.
OR
 If unsuccessful:
 The radio repeats the attempt until the preprogrammed number of tries expires.
-

*You can also manually select a target radio address (see **Initiating Remote Monitor by Manual Dial** on page 47).*

■ Scan Lists

Scan lists are created and assigned to individual channels/groups. Your radio scans for voice activity by cycling through the channel/group sequence specified in the scan list for the current channel/group.

Your radio can support up to 32 scan lists, with a maximum of 16 members in a list. Each scan list supports a mixture of both analog and digital entries.

You can add, delete, or prioritize  channels by editing a scan list.

Viewing an Entry in the Scan List

Procedure:

- 1  to access the menu.

- 2  or  to Scan and press  to select.

- 3  or  to View/Edit List and press  to select.

- 4 Use  or  to view each member on the list.

 *The priority icon appears left of the member's alias, if set, to indicate whether the member is on a Priority 1 or Priority 2 channel list. You **cannot** have multiple Priority 1 or Priority 2 channels in a scan list.*

*There is no priority icon if priority is set to **None**.*

Editing the Scan List

Adding a New Entry to the Scan List

Procedure:

- 1  to access the menu.

 - 2 ◀ or ▶ to Scan and press  to select.

 - 3 ◀ or ▶ to View/Edit List and press  to select.

 - 4 ◀ or ▶ to Add Member and press  to select.

 - 5 ◀ or ▶ to the required alias or ID and press  to select.

 - 6 ◀ or ▶ to the required priority level (Priority 1 or Priority 2 is **ONLY** applicable when in Analog mode) and press  to select.

 - 7 The display shows Entry Saved, followed immediately by Add Another?.

 - 8 ◀ or ▶ to Yes and press  to select, to add another entry, and repeat steps 5 and 6.

- OR**
- ◀ or ▶ to No and press  to select to save the current list.
-

Deleting an Entry from the Scan List

Procedure:

- 1  to access the menu.

 - 2 ◀ or ▶ to Scan and press  to select.

 - 3 ◀ or ▶ to View/Edit List and press  to select.

 - 4 ◀ or ▶ to the required alias or ID and press  to select.

 - 5 ◀ or ▶ to Delete? and press  to select.

 - 6 At Delete Entry?, ◀ or ▶ to Yes and press  to select, to delete the entry. The display shows Entry Deleted.

- OR**
- ◀ or ▶ to No and press  to select to return to the previous screen.
-
- 7 Repeat steps 4 to 6 to delete other entries.
-

After deleting all required aliases or IDs, long press  to return to the Home screen.

Setting and Editing Priority for an Entry in the Scan List

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Scan and press  to select.
- 3 ◀ or ▶ to View/Edit List and press  to select.
- 4 ◀ or ▶ to the required alias or ID and press  to select.
- 5 ◀ or ▶ to Edit Priority? and press  to select.
- 6 ◀ or ▶ to the required priority level (Priority 1 or Priority 2 is **ONLY** applicable when in Analog mode) and press  to select.
- 7 The display shows Entry Saved before returning to the previous screen.
- 8 The priority icon appears left of the member's name.

*There is no priority icon if priority is set to **None**.*

■ Scan

When you start a scan, your radio cycles through the preprogrammed scan list for the current channel looking for voice activity.

The yellow LED blinks and you see the scan icon on the display.

During a dual mode scan, if you are on a digital channel, and your radio locks onto an analog channel, it automatically switches from digital mode to analog mode for the duration of the call. This is also true for the reverse.

There are two ways of initiating scan:

- **Main Channel Scan (Manual):** Your radio scans all the channels/groups in your scan list. On entering scan, your radio may – depending on the settings – automatically start on the last scanned “active” channel/group or on the channel where scan was initiated.
- **Auto Scan (Automatic):** Your radio automatically starts scanning when you select a channel/group that has Auto Scan enabled.

Starting and Stopping Scan

Procedure:

Press the preprogrammed **Scan** button to start or stop Scan.

OR

Follow the procedure below.

- 1 Use the Channel Rocker to select a channel preprogrammed with a scan list.

- 2  to access the menu.

- 3  or  to Scan and press  to select.

- 4 The display shows Turn On if scan is disabled.
OR
The display shows Turn Off if scan is enabled.

- 5 Press  to select.

- 6 The yellow LED blinks and the scan icon is displayed when Scan is enabled.
OR
The LED turns off and the scan icon is not displayed when Scan is disabled.

While scanning, the radio will only accept data (e.g. text message, location, telemetry, or PC data) if received on its Selected Channel.

Responding to a Transmission During a Scan

During scanning, your radio stops on a channel/group where activity is detected. The radio stays on that channel for a preprogrammed time period known as “hang time”.

Procedure:

- 1 Press the **PTT** button during hang time. The green LED lights up.

- 2 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

- 3 Release the **PTT** button to listen.

- 4 If you do not respond within the hang time, the radio returns to scanning other channels/groups.

 Deleting a Nuisance Channel

If a channel continually generates unwanted calls or noise (termed a “nuisance” channel), you can temporarily remove the unwanted channel from the scan list.

This capability does not apply to the channel designated as the Selected Channel.

Procedure:

- 1 When your radio “locks on to” an unwanted or nuisance channel, press the preprogrammed **Nuisance Channel Delete** button until you hear a tone.
- 2 Release the **Nuisance Channel Delete** button. The nuisance channel is deleted.

*Deleting a “nuisance” channel is **only** possible through the preprogrammed **Nuisance Channel Delete** button. This feature is **not** accessible through the menu.*

 Restoring a Nuisance Channel**Procedure:**

To restore the deleted nuisance channel, do **one** of the following:

- Power the radio off and then powering it on again, **OR**
- Stop and restart a scan via the preprogrammed **Scan** button or menu, **OR**
- Change the channel via the Channel Rocker.

■ Contacts Settings

Contacts provides “address-book” capabilities on your radio. Each entry corresponds to an alias or ID that you use to initiate a call.

Additionally, each entry, depending on context, associates with **one** of five types of calls: Group Call, Private Call, All Call, PC Call or Dispatch Call.

PC Call and Dispatch Call are data-related. They are only available with the applications. Refer to the data applications documentation for further details.

Your radio supports two Contacts lists, one for Analog contacts (with a maximum of 128 members) and one for Digital contacts (with a maximum of 256 members).

Each entry within Contacts displays the following information:

- Call Type
- Call Alias
- Call ID

NOTE: You can add, delete, or edit subscriber aliases or IDs for the Digital Contacts list.

For the Analog Contacts list, you can only view the list and initiate a Call Alert. Adding, deleting, and editing capabilities can only be performed by your dealer.

Making a Group Call from Contacts

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to **Contacts** and press  to select. The entries are alphabetically sorted.
- 3 ◀ or ▶ to the required group alias or ID.
- 4 Press the **PTT** button to make the call. The green LED lights up. The display shows the group alias or ID, and the Group Call icon.
- 5 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 6 Release the **PTT** button to listen. When any user in the group responds, the green LED blinks. You see the Group Call icon, the group alias or ID, and that user's alias or ID on your display.
- 7 If there is no voice activity for a preprogrammed period of time, the call ends.

Making a Private Call from Contacts

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to **Contacts** and press  to select. The entries are alphabetically sorted.
- 3 ◀ or ▶ to the required subscriber alias or ID.
- 4 Press the **PTT** button to make the call. The green LED lights up. The first line displays the subscriber alias or ID. The second line displays **Private Call** and the Private Call icon.
- 5 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 6 Release the **PTT** button to listen. When the target radio responds, the green LED blinks and the display shows the transmitting user's alias or ID.
- 7 If there is no voice activity for a preprogrammed period of time, the call ends.
- 8 You hear a short tone. The display shows **Call Ended**.

NOTE: If you release the **PTT** button while the radio is setting up the call, it exits without any indication and returns to the previous screen.

Your radio may be programmed to perform a radio presence check prior to setting up the Private Call. If the target radio is not available, you hear a short tone and see **Party Not Available** on the display.

The radio returns to the menu prior to initiating the radio presence check.

■ Call Indicator Settings

Activating and Deactivating Call Ringers for Private Calls

You can turn on or off the ringing tones for a received Private Call.

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to **Utilities** and press  to select.
- 3 ◀ or ▶ to **Radio Settings** and press  to select.
- 4 ◀ or ▶ to **Tones/Alerts** and press  to select.
- 5 ◀ or ▶ to **Call Ringers** and press  to select.
- 6 ◀ or ▶ to **Private Call** and press  to select.
- 7 The display shows **Turn On**. Press  to enable Call Ringers for Private Calls. The display shows **Private Call Ringer On**.
OR
The display shows **Turn Off**. Press  to disable Call Ringers for Private Calls. The display shows **Private Call Ringer Off**.

Activating and Deactivating Call Ringers for Text Messaging

You can turn on or off the ringing tones for a received Text Message.

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to Utilities and press  to select.

- 3 ◀ or ▶ to Radio Settings and press  to select.

- 4 ◀ or ▶ to Tones/Alerts and press  to select.

- 5 ◀ or ▶ to Call Ringers and press  to select.

- 6 ◀ or ▶ to Text Message and press  to select.

- 7 The current tone is indicated by a ✓.

- 8 ◀ or ▶ to the preferred tone and press  to select. The display shows Tone <Number> Selected and a ✓ appears left of the selected tone.
OR
◀ or ▶ to Turn Off and press  to select. The display shows Text Message Ringer Off and a ✓ appears left of Turn Off.

Assigning Ring Styles

You can program your radio to sound one of ten predefined ringing tones when receiving a Call Alert or a Text Message from a particular contact.

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to Contacts and press  to select. The entries are alphabetically sorted.

- 3 ◀ or ▶ to the required alias or ID and press  to select.

- 4 ◀ or ▶ to Ring Style and press  to select.

- 5 A ✓ indicates the current selected tone.

- 6 ◀ or ▶ to the required tone and press  to select.

- 7 The display shows Contact Saved.

The radio sounds out each ring style as you navigate through the list.

Escalating Alarm Tone Volume

You can program your radio to continually alert you when a radio call remains unanswered. This is done by automatically increasing the alarm tone volume over time. This feature is known as Escalert.

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Utilities and press  to select.
- 3 ◀ or ▶ to Radio Settings and press  to select.
- 4 ◀ or ▶ to Tones/Alerts and press  to select.
- 5 ◀ or ▶ to Escalert and press  to select.
- 6 The display shows Turn On. Press  to enable Escalert.
The display shows Escalert On.
OR
The display shows Turn Off. Press  to disable Escalert.
The display shows Escalert Off.

■ Call Log Features

Your radio keeps track of all recent outgoing, answered, and missed Private Calls. Use the call log feature to view and manage recent calls.

You can perform the following tasks in each of your call lists:

- Store alias or ID to Contacts
- Delete

Viewing Recent Calls

The lists are Missed, Answered, and Outgoing.

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Call Log and press  to select.
- 3 ◀ or ▶ to preferred list and press  to select.
- 4 The display shows the most recent entry at the top of the list.
- 5 ◀ or ▶ to view the list.

*Press the **PTT** button to start a Private Call with the current selected alias or ID.*

Missed Call Screen

Whenever a call is missed, your radio displays a missed call message. Select **View?** to view it immediately or **View Later?** to view at a later time.

NOTE: The radio exits the Missed Call screen and sets up a Private Call if you press the **PTT** button while viewing a missed call number.

Procedure:

- 1 The display shows **Missed Calls**, along with the number of calls missed and **View?**.
- 2 Press **OK** to view the missed call alias or ID. The missed call log list appears on display.
Press **OK** to store or delete the entry.
OR
◀ or ▶ to **View Later?** and press **OK** to select. You return to the Home screen.

*To store/save an alias or ID from the Missed Call list, see **Storing an Alias or ID from the Missed Call List** on page 49.*

Deleting a Call from a Call List

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to **Call Log** and press **OK** to select.
- 3 ◀ or ▶ to the required list and press **OK** to select.
- 4 ◀ or ▶ to the required alias or ID and press **OK** to select.
- 5 ◀ or ▶ to **Delete Entry?** and press **OK** to select.
- 6 ◀ or ▶ to **Yes** and press **OK** to select.
- 7 The display shows **Entry Deleted**.

*The display shows **List Empty** when you select a call list and it contains no entries.*

■ Call Alert Operation

Call Alert paging enables you to alert a specific radio user to call you back when they are able to do so.

This feature is applicable for subscriber aliases or IDs only and is accessible through the menu via Contacts or manual dial.

Receiving and Acknowledging a Call Alert

When you receive a Call Alert page, you see `Call Alert` that alternates with the alias or ID of the calling radio on the display.

Procedure:

- 1 You hear a repetitive tone. The yellow LED blinks.
- 2 Press and release the **PTT** button to acknowledge the alert.
OR
Press  to exit the Call Alert.

Making a Call Alert from the Contacts List

Procedure:

- 1  to access the menu.
- 2  or  to `Contacts` and press  to select.
- 3  or  to the required subscriber alias or ID and press  to select.
- 4  or  to `Call Alert` and press  to select.
- 5 The display shows `Call Alert: <Subscriber Alias or ID>`, indicating that the Call Alert has been sent.
- 6 The green LED lights up when your radio is sending the Call Alert.
- 7 If the Call Alert acknowledgement is received, a tone sounds and the display shows `Call Alert Successful`.
OR
If the Call Alert acknowledgement is not received, a tone sounds and the display shows `Call Alert Failed`.

*You can also send a Call Alert by manually dialing the subscriber ID (see **Sending a Call Alert by Manual Dial** on page 49).*

Making a Call Alert with the One Touch Call Button

Procedure:

- 1 Press the preprogrammed **One Touch Call** button to make a Call Alert to the predefined alias or ID.
- 2 The display shows `Call Alert: <Subscriber Alias or ID>`, indicating that the Call Alert has been sent.
- 3 The green LED lights up when your radio is sending the Call Alert.
- 4 If the Call Alert acknowledgement is received, a tone sounds and the display shows `Call Alert Successful`.
OR
If the Call Alert acknowledgement is not received, a tone sounds and the display shows `Call Alert Failed`.

■ Emergency Operation

An Emergency Alarm is used to indicate a critical situation. You are able to initiate an Emergency at any time on any screen display even when there is activity on the current channel.

Your radio supports 3 Emergency Alarms:

- Emergency Alarm
- Emergency Alarm with Call
- Emergency Alarm with Voice to Follow 

In addition, each alarm has the following types:

- Regular – Radio transmits an alarm signal and shows audio and/or visual indicators.
- Silent – Radio transmits an alarm signal without any audio or visual indicators.

Only **one** of the Emergency Alarms above can be assigned to the preprogrammed **Emergency** button or the **Emergency** footswitch.

Receiving an Emergency Alarm

Procedure:

- 1 When receiving an Emergency Alarm, the display shows the Emergency icon, the number of alarms received, and **Alarm Rcvd**, which alternates with the alias or ID of the sender.
- 2 A tone sounds and the red LED blinks.
- 3 If enabled, your radio automatically acknowledges the Emergency Alarm.

When your radio receives an Emergency Alarm, it displays the Emergency Alarm received indications until acknowledgement is sent and you exit the Emergency mode.

You will not be able to receive any other indications or displays for any other calls until you exit the Emergency Alarm received screen.

NOTE: Short press , then long press the preprogrammed **Emergency** button to clear the Emergency Alarm received indications and exit Emergency mode.

Responding to an Emergency Alarm

Procedure:

When receiving an Emergency Alarm:

- 1 Press any button to stop all Emergency Alarm received indications.
- 2 Press **PTT** button to initiate a call with the emergency initiating radio. The green LED lights up. Your radio remains in the Emergency mode.
- 3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
- 4 Release the **PTT** button to listen. When the emergency initiating radio responds, the green LED blinks. You see the Group Call icon, the group alias or ID, and transmitting radio alias or ID on your display.
- 5 Once your call ends, short press , then long press the preprogrammed **Emergency** button to clear the Emergency Call received indications and exit Emergency mode.
- 6 The radio returns to the Home screen.

Sending an Emergency Alarm

This feature allows you to send an Emergency Alarm, a non-voice signal, which triggers an alert indication on another radio.

Procedure:

- 1 Press the preprogrammed **Emergency** button or the **Emergency** footswitch.

- 2 The display shows *Sending Alarm*, which alternates with your radio ID. The green LED lights up and the Emergency icon appears on the Home screen display.

- 3 When an Emergency Alarm acknowledgment is received, the Emergency tone sounds and the green LED blinks. The display shows *Emergency Alarm Successful*.
OR
If your radio does not receive an Emergency Alarm acknowledgement, and after all retries have been exhausted, a tone sounds and the display shows *Emergency Alarm Failed*.

- 4 Radio exits the Emergency Alarm mode and returns to the Home screen.

Sending an Emergency Alarm with Call

This feature allows you send an Emergency Alarm to another radio. Upon acknowledgement, both radios can communicate over a preprogrammed Emergency channel.

Procedure:

- 1 Press the preprogrammed **Emergency** button or the **Emergency** footswitch.

- 2 The display shows *Sending Alarm*, which alternates with your radio ID. The green LED lights up and the Emergency icon appears on the Home screen display.

- 3 When an Emergency Alarm acknowledgment is received, the Emergency tone sounds and the green LED blinks. The display shows *Emergency Alarm Successful*.

- 4 Press **PTT** button to make the call. The green LED lights up and the group icon appears on the display.

- 5 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

- 6 Long press the preprogrammed **Emergency** button to exit the Emergency mode.

- 7 The radio returns to the Home screen.

Sending an Emergency Alarm with Voice to Follow

This feature allows you to send an Emergency Alarm to another radio. Upon acknowledgement, your radio's microphone is automatically activated, allowing you to communicate with the other radio without pressing the **PTT**.

This activated microphone state is also known as "hot mic".

If you press the **PTT** button during the preprogrammed hot mic transmission period, the radio ignores the **PTT** press and remains in Emergency mode.

NOTE: If you press the **PTT** button during hot mic, and continue to press it after the hot mic duration expires, the radio continues to transmit until you release the **PTT** button.

Procedure:

- 1 Press the preprogrammed **Emergency** button or the **Emergency** footswitch.
- 2 The display shows *Sending Alarm*. The green LED lights up and the Emergency icon is displayed.

- 3 Once the display shows *Emergency Alarm Successful*, speak clearly into the microphone. When hot mic has been enabled, the radio automatically transmits without a **PTT** press until the hot mic duration expires.
- 4 While transmitting, the green LED lights up and the Emergency icon appears on the display.
- 5 Once the hot mic duration expires, the radio automatically stops transmitting. To transmit again, press the **PTT** button.

If the Emergency Alarm request fails, the radio returns to the Home screen.

Reinitiating an Emergency Mode

There are two instances where this can happen:

- You change the channel while the radio is in Emergency mode. This exits the Emergency mode. If Emergency Alarm is enabled on this new channel, the radio reinitiates Emergency.
- You press the preprogrammed **Emergency** button during an Emergency initiation/transmission state. This causes the radio to exit this state, and to reinitiate Emergency.

Exiting Emergency Mode

Your radio exits Emergency mode when **one** of the following occurs:

- Emergency Alarm acknowledgement is received (for **Emergency Alarm** only), **OR**
- All retries to send the alarm have been exhausted, **OR**
- The preprogrammed **Emergency** button is long pressed (not applicable for **Emergency Alarm with Voice to Follow**).

NOTE: If your radio is powered off, it exits the Emergency mode. The radio will not reinitiate the Emergency mode automatically when it is turned on again.

■ Text Messaging Features

Sending a Quick Text Message

Your radio supports a maximum of ten (10) Quick Text messages as programmed by your dealer.

Procedure:

Press the preprogrammed **Text Messaging** button and proceed to step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2 ◀ or ▶ to Messages and press  to select.
- 3 ◀ or ▶ to Quick Text and press  to select.
- 4 ◀ or ▶ to the required Quick Text and press  to select.
- 5 ◀ or ▶ to the required alias or ID and press  to select.
- 6 The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.
- 7 If the message is sent successfully, a tone sounds and the display shows Message Sent.
OR
If the message cannot be sent, the display shows Message Sent Failed.

Sending a Quick Text Message with the One Touch Call Button

- 1 Press the preprogrammed **One Touch Call** button to send a predefined Quick Text message to a predefined alias or ID.
- 2 The display shows *Text Message: <Subscriber/Group Alias or ID>*, confirming your message is being sent.
- 3 If the message is sent successfully, a tone sounds and the display shows *Message Sent*.
OR
If the message cannot be sent, the display shows *Message Sent Failed*.

Only applicable when sending to subscriber aliases or IDs:

*If the target radio successfully receives the Quick Text message, a tone sounds and the display shows **Message Ack Rcvd**.*

OR

*If the target radio fails to receive the Quick Text message, a tone sounds and the display shows **Message Ack Failed**.*

NOTE: While Quick Text messages are preprogrammed, you can edit each message before sending it (see **Editing a Quick Text Message** on page 52).

Receiving a Text Message

When receiving a message, the display shows the alias or ID of the sender and the message icon at the far left of the screen.

You can select one of the following options when receiving a text message:

- Read
- Read Later
- Delete

NOTE: The radio exits the Text Message alert screen and sets up a Private or Group Call if the **PTT** button is pressed when the radio is displaying the alert screen.

Reading a Text Message

Procedure:

- 1  or  to Read and press  to select.
- 2 Selected message in the Inbox opens.
- 3 Press  to return to the Inbox.
OR
Press  to reply, forward, or delete the text message.

*Selecting **Read Later** returns you to the screen you were on prior to receiving the text message. Selecting **Delete** deletes the text message.*

Managing Text Messages

Use the Inbox to manage your text messages. The Inbox is capable of storing a maximum of 30 messages.

Your radio supports the following options for text messages:

- Reply (via Quick Text)
- Forward
- Save
- Delete
- Delete All

Text messages in the Inbox are sorted according to the most recently received.

NOTE: Press  at any time to return to the previous screen or long press  to return to the Home screen.

Viewing a Text Message from the Inbox

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Messages and press  to select.

- 3 ◀ or ▶ to Inbox and press  to select.

- 4 ◀ or ▶ to view the messages.

- 5 Press  to select the current message, and press  again to reply, forward, save, or delete that message.

OR

Long press  to return to the Home screen.

Replying to a Text Message with Quick Text

Procedure:

Press the preprogrammed **Text Messaging** button and proceed to step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2 ◀ or ▶ to Messages and press  to select.
- 3 ◀ or ▶ to Inbox and press  to select.
- 4 ◀ or ▶ to the required message and press  to select.
- 5 Press  once more to access the sub-menu.
- 6 ◀ or ▶ to Reply and press  to select.

- 7 ◀ or ▶ to Quick Text and press  to select.
- 8 ◀ or ▶ to the required message and press  to select.
- 9 The display shows Text Message: <Subscriber/Group Alias or ID>, confirming your message is being sent.
- 10 If the message is sent successfully, a tone sounds and the display shows Message Sent.
OR
If the message cannot be sent, the display shows Message Sent Failed.

Only applicable when sending to subscriber aliases or IDs:

If the target radio successfully receives the Quick Text message, a tone sounds and the display shows Message Ack Rcvd.

OR

If the target radio fails to receive the Quick Text message, a tone sounds and the display shows Message Ack Failed.

NOTE: If you are using a keypad microphone, you can also write and send a new message (see **Writing and Sending a Text Message** on page 50) or modify a Quick Text message before sending it (see **Editing a Quick Text Message** on page 52).

Deleting a Text Message from the Inbox

Procedure:

Press the preprogrammed **Text Messaging** button and proceed to step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2 ◀ or ▶ to Messages and press  to select.
- 3 ◀ or ▶ to Inbox and press  to select.
- 4 ◀ or ▶ to the required message and press  to select.
- 5 Press  once more to access the sub-menu.
- 6 ◀ or ▶ to Delete and press  to select.
- 7 At Delete Message?, ◀ or ▶ to Yes and press  to select.
- 8 The display shows Message Deleted.
- 9 The screen returns to the Inbox.

Deleting All Text Messages from the Inbox

Procedure:

Press the preprogrammed **Text Messaging** button and proceed to step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2 ◀ or ▶ to Messages and press  to select.
- 3 ◀ or ▶ to Inbox and press  to select.
- 4 ◀ or ▶ to Delete All and press  to select.
- 5 At Delete Message?, ◀ or ▶ to Yes and press  to select.
- 6 The display shows `Inbox Cleared`.

The display shows `List Empty` when you select the Inbox and it contains no text messages.

NOTE: Additional text messaging features are available with a keypad-enabled microphone. Refer to **Text Messaging** on page 50 for more details.

See **Audio** on page 55 or visit the following website for a list of Motorola-approved microphones:

<http://www.motorola.com/governmentandenterprise>

Security

You can enable or disable any radio in the system. For example, you might want to disable a stolen radio, to prevent the thief from using it, and enable that radio, when it is recovered.

NOTE: Performing Radio Disable and Enable is limited to radios with these functions enabled.

Radio Disable

Procedure:

Using the preprogrammed **Radio Disable** button.

- 1 Press the preprogrammed **Radio Disable** button.
- 2 ◀ or ▶ to the required subscriber alias or ID and press  to select.
- 3 The display shows `Radio Disable: <Subscriber Alias or ID>` and the green LED lights up.
- 4 Wait for acknowledgment.
- 5 If successful, a tone sounds and the display shows `Radio Disable Successful`.
OR
If not successful, a tone sounds and the display shows `Radio Disable Failed`.

OR

Procedure:

Using the menu.

- 1  to access the menu.
- 2 ◀ or ▶ to Contacts and press  to select. The entries are alphabetically sorted.
- 3 ◀ or ▶ to the required subscriber alias or ID and press  to select.
- 4 ◀ or ▶ to Radio Disable and press  to select. The green LED blinks.
- 5 The display shows Radio Disable: <Subscriber Alias or ID> and the green LED lights up.
- 6 Wait for acknowledgment.
- 7 If successful, a tone sounds and the display shows Radio Disable Successful.
OR
If not successful, a tone sounds and the display shows Radio Disable Failed.

Do not press  during the Radio Disable operation as you will not get an acknowledgement message.

*You can also access this feature using manual dial (see **Radio Disable via Manual Dial** on page 53).*

Radio Enable

Procedure:

Using the preprogrammed **Radio Enable** button.

- 1 Press the preprogrammed **Radio Enable** button.
- 2 ◀ or ▶ to the required subscriber alias or ID and press  to select.
- 3 The display shows Radio Enable: <Subscriber Alias or ID> and the green LED lights up.
- 4 Wait for acknowledgment.
- 5 If successful, a tone sounds and the display shows Radio Enable Successful.
OR
If not successful, a tone sounds and the display shows Radio Enable Failed.

OR

Procedure:

Using the menu.

- 1  to access the menu.
- 2 ◀ or ▶ to Contacts and press  to select. The entries are alphabetically sorted.

- 3 ◀ or ▶ to the required subscriber alias or ID and press  to select.
- 4 ◀ or ▶ to Radio Enable and press  to select. The green LED blinks.
- 5 The display shows Radio Enable: <Subscriber Alias or ID> and the green LED lights up.
- 6 Wait for acknowledgment.
- 7 If successful, a tone sounds and the display shows Radio Enable Successful.
OR
If not successful, a tone sounds and the display shows Radio Enable Failed.

Do not press  during the Radio Enable operation as you will not get an acknowledgement message.

You can also access this feature using manual dial (see **Radio Enable via Manual Dial** on page 53).

Utilities

Setting the Squelch Level

You can adjust your radio's squelch level to filter out unwanted calls with low signal strength or channels that have a higher than normal background noise.

Settings: Normal is the default. Tight filters out (unwanted) calls and/or background noise. However, calls from remote locations may also be filtered out.

Procedure:

Press the preprogrammed **Squelch** button to toggle squelch level between normal and tight.

OR

Follow the procedure below.

- 1  to access the menu.
- 2 ◀ or ▶ to Utilities and press  to select.
- 3 ◀ or ▶ to Radio Settings and press  to select.
- 4 ◀ or ▶ to Squelch and press  to select.
- 5 Choose either Tight or Normal and press  to select.
- 6 Screen returns to the previous menu.

Setting the Power Level

You can customize your radio's power setting to high or low for each channel.

Settings: **High** enables communication with radios located at a considerable distance from you. **Low** enables communication with radios in closer proximity.

Procedure:

Press the preprogrammed **Power Level** button to toggle transmit power level between high and low.

OR

Follow the procedure below.

- 1  to access the menu.

- 2 ◀ or ▶ to Utilities and press  to select.

- 3 ◀ or ▶ to Radio Settings and press  to select.

- 4 ◀ or ▶ to Power and press  to select.

- 5 Change your current setting as prompted on the display.

- 6 Press  to select a new power level.

- 7 Screen returns to the previous menu.

Long press  to return to the Home screen. The power level icon is visible.

Controlling the Display Backlight

You can set the radio's display backlight intensity to either **Low**, **Medium**, **High**, or **Off**, to light up the display and the Menu Navigation Buttons backlighting accordingly. The setting also affects the keypad backlighting on a keypad microphone.

Procedure:

Press the preprogrammed **Backlight** button to set the backlight intensity. Each press changes the display backlight setting to a new setting.

OR

Follow the procedure below.

- 1  to access the menu.

- 2 ◀ or ▶ to Utilities and press  to select.

- 3 ◀ or ▶ to Radio Settings and press  to select.

- 4 ◀ or ▶ to Backlight and press  to select.

- 5 A ✓ indicates the current setting.

- 6 ◀ or ▶ to the required setting and press  to select.

- 7 The display lights up accordingly and the screen returns to the previous menu.

*The display backlight, buttons and/or keypad backlighting are automatically turned off if the LED indicators are disabled (see **Turning the LED Indicators On or Off** on page 42).*

Turning Horns/Lights On or Off

Your radio is able to notify you of an incoming call via the horns and lights feature. When activated, an incoming call sounds your vehicle's horn and turns on its lights.

This feature needs to be installed through your radio's rear accessory connector by your dealer.

Procedure:

Press the preprogrammed **Horns/Lights** button to toggle horns and lights feature on or off.

OR

Follow the procedure below.

- 1  to access the menu.

 - 2 ◀ or ▶ to Utilities and press  to select.

 - 3 ◀ or ▶ to Radio Settings and press  to select.

 - 4 ◀ or ▶ to Horns/Lights and press  to select.

 - 5 The display shows Turn On. Press  to enable the horns and lights feature. The display shows Horns and Lights On.
- OR**
- The display shows Turn Off. Press  to disable the horns and lights feature. The display shows Horns and Lights Off.

Turning Radio Tones/Alerts On or Off

You can enable and disable all radio tones and alerts (except for the incoming Emergency alert tone) if needed.

Procedure:

Press the preprogrammed **All Tones/Alerts** button to toggle all tones on or off.

OR

Follow the procedure below.

- 1  to access the menu.

 - 2 ◀ or ▶ to Utilities and press  to select.

 - 3 ◀ or ▶ to Radio Settings and press  to select.

 - 4 ◀ or ▶ to Tones/Alerts and press  to select.

 - 5 ◀ or ▶ to All Tones and press  to select.

 - 6 The display shows Turn On. Press  to enable all tones and alerts. The display shows All Tones On.
- OR**
- The display shows Turn Off. Press  to disable all tones and alerts. The display shows All Tones Off.

Turning the Talk Permit Tone On or Off

You can enable and disable the Talk Permit Tone if needed.

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to Utilities and press  to select.

- 3 ◀ or ▶ to Radio Settings and press  to select.

- 4 ◀ or ▶ to Tones/Alerts and press  to select.

- 5 ◀ or ▶ to Talk Permit and press  to select.

- 6 Select Turn On. Press  to enable the Talk Permit Tone. The display shows Talk Permit Tone On.
OR
Select Turn Off. Press  to disabled the Talk Permit Tone. The display shows Talk Permit Tone Off.

Turning the LED Indicators On or Off

You can enable and disable the LED Indicators if needed.

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to Utilities and press  to select.

- 3 ◀ or ▶ to Radio Settings and press  to select.

- 4 ◀ or ▶ to LED Indicator and press  to select.

- 5 Select Turn On. Press  to enable the LED Indicators. The display shows All LEDs On.
OR
Select Turn Off. Press  to disable the LED Indicators. The display shows All LEDs Off.

*The display backlight, buttons and/or keypad backlighting are automatically turned off if the LED Indicators are disabled (see **Controlling the Display Backlight** on page 40).*

Turning the Introduction Screen On or Off

You can enable and disable the Introduction Screen if needed.

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to Utilities and press  to select.

- 3 ◀ or ▶ to Radio Settings and press  to select.

- 4 ◀ or ▶ to Intro Screen and press  to select.

- 5 The display shows Turn On. Press  to enable the Introduction Screen. The display shows Intro Screen On.
OR
The display shows Turn Off. Press  to disable the Introduction Screen. The display shows Intro Screen Off.

Accessing General Radio Information

Your radio contains information on the following:

- Radio ID
- Software Version
- Codeplug Version

NOTE: Press  at any time to return to the previous screen or long press  to return to the Home screen.

Checking the Radio ID

Displays the ID of your radio.

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to Utilities and press  to select.

- 3 ◀ or ▶ to Radio Info and press  to select.

- 4 ◀ or ▶ to My Number and press  to select.

- 5 The radio ID is displayed.

 Checking the Firmware Version

Displays the firmware version on your radio.

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Utilities and press  to select.
- 3 ◀ or ▶ to Radio Info and press  to select.
- 4 ◀ or ▶ to Firmware Ver. and press  to select.
- 5 The current firmware version is displayed.

 Checking the Codeplug Version

Displays the codeplug version on your radio.

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Utilities and press  to select.
- 3 ◀ or ▶ to Radio Info and press  to select.
- 4 ◀ or ▶ to CP Ver. and press  to select.
- 5 The current codeplug version is displayed.

■ **Keypad Microphone Features**

The following additional features for your radio are available with a keypad-enabled microphone:

Using the Keypad	page 45
Additional Advanced Features	page 46
Text Messaging	page 50
Security	page 53

■ Using the Keypad

You can use the 3 x 4 alphanumeric keypad on the keypad microphone (Motorola part number: RMN5065_) to access your radio's features. You can use the keypad to enter subscriber aliases or IDs, and text messages. Many characters require that you press a key multiple times. The table below shows the number of times a key needs to be pressed to generate the required character.

Key	Number of Times Key is Pressed												
	1	2	3	4	5	6	7	8	9	10	11	12	13
	1	.	,	?	!	@	&	'	%	-	:	*	#
	A	B	C	2									
	D	E	F	3									
	G	H	I	4									
	J	K	L	5									
	M	N	O	6									
	P	Q	R	S	7								
	T	U	V	8									
	W	X	Y	Z	9								
	0	NOTE: Press to enter "0" and long press to activate the CAPS lock. Another long press to turn off the CAPS lock.											
	* or del	NOTE: Press during text entry to delete the character. Press during numeric entry to enter a "**".											
	# or space	NOTE: Press during text entry to insert a space. Press during numeric entry to enter a "#".											

Turning Keypad Tones On or Off

You can enable and disable Keypad Tones if needed.

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Utilities and press  to select.
- 3 ◀ or ▶ to Radio Settings and press  to select.
- 4 ◀ or ▶ to Tones/Alerts and press  to select.
- 5 ◀ or ▶ to Keypad Tones and press  to select.
- 6 The display shows Turn On. Press  to enable keypad tones. The display shows Keypad Tone On.
OR
The display shows Turn Off. Press  to disable keypad tones. The display shows Keypad Tone Off.

■ Additional Advanced Features

Initiating a Radio Check by Manual Dial

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Contacts and press  to select.
- 3 ◀ or ▶ to Manual Dial and press  to select.
- 4 If there is a previously dialed subscriber ID, the ID appears along with a blinking cursor.
Use the keypad to edit the ID. Press  to select.
OR
Use the keypad to enter a new subscriber ID. Press  to select.
- 5 ◀ or ▶ to Radio Check and press  to select.
- 6 The display shows Radio Check: <Subscriber ID>, indicating that Radio Check is in progress. The green LED lights up.
- 7 Wait for acknowledgement.

- 8 If the target radio is active in the system, a tone sounds and the display briefly shows Target Radio Available.
OR
 If the target radio is not active in the system, a tone sounds and the display briefly shows Target Radio Not Available.
-
- 9 Radio returns to the subscriber ID screen.
-

If the  button is pressed when the radio is waiting for acknowledgement, a tone sounds, and the radio terminates all retries and exits Radio Check mode.

Initiating Remote Monitor by Manual Dial

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to Contacts and press  to select.

- 3 ◀ or ▶ to Manual Dial and press  to select.

- 4 If there is a previously dialed subscriber ID, the ID appears along with a blinking cursor.
 Use the keypad to edit the subscriber ID. Press  to select.
OR
 Use the keypad to enter a new subscriber ID. Press  to select.

- 5 ◀ or ▶ to Remote Mon. and press  to select.

- 6 Wait for acknowledgment.

- 7 The display shows Remote Monitor Successful.
OR
 The display shows Remote Monitor Failed.

- 8 If successful:
 Once the timer expires, the radio sounds an alert tone and the green LED turns off. The display shows Remote Monitor Ended.
OR
 If unsuccessful:
 The radio repeats the attempt until the preprogrammed number of tries expires.

Making a Private Call by Manual Dial

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to **Contacts** and press  to select. The entries are alphabetically sorted.

- 3 ◀ or ▶ to **Manual Dial** and press  to select.

- 4 If there is a previously dialed subscriber ID, the ID appears along with a blinking cursor.
Use the keypad to edit the subscriber ID.
OR
Use the keypad to enter a new subscriber ID.

- 5 Press the **PTT** button to make the call. The green LED lights up. The first line displays the target radio's ID. The second line displays **Private Call** and the Private Call icon.

- 6 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

- 7 Release the **PTT** button to listen. When the target radio responds, the green LED blinks.

- 8 If there is no voice activity for a preprogrammed period of time, the call ends.

- 9 You hear a short tone. The display shows **Call Ended**.

Making a Private Call by Alias Search

You can also use alias or alphanumeric search to retrieve the required subscriber alias.

This feature is only applicable while in **Contacts**.

Procedure:

- 1  to access the menu.

- 2 ◀ or ▶ to **Contacts** and press  to select. The entries are alphabetically sorted.

- 3 Key in the first character of the alias.

- 4 ◀ or ▶ to the required alias.

- 5 Press the **PTT** button to make the call. The green LED lights up. The first line displays the target radio's ID. The second line displays **Private Call** and the Private Call icon.

- 6 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

- 7 Release the **PTT** button to listen. When the target radio responds, the green LED blinks.

- 8 If there is no voice activity for a preprogrammed period of time, the call ends.

- 9 You hear a short tone. The display shows **Call Ended**.

Storing an Alias or ID from the Missed Call List

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Call Log and press (OK) to select.
- 3 ◀ or ▶ to Missed and press (OK) to select.
- 4 ◀ or ▶ to the required missed call alias or ID and press (OK) to select.
- 5 ◀ or ▶ to Store? and press (OK) to select.
- 6 A blinking cursor appears. If needed, key in the alias for that ID and press (OK).
- 7 The display shows Contact Saved.

You can also store an ID without an alias.

Sending a Call Alert by Manual Dial

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to Contacts and press (OK) to select.
- 3 ◀ or ▶ to Manual Dial and press (OK) to select.
- 4 A blinking cursor appears. Enter the subscriber ID you want to send the Call Alert to and press (OK).
- 5 ◀ or ▶ to Call Alert and press (OK) to select.
- 6 The display shows Call Alert: <Subscriber ID>, confirming that the Call Alert has been sent.
- 7 The green LED lights up when your radio is sending the Call Alert.
- 8 If the Call Alert acknowledgement is received, a tone sounds and the display shows Call Alert Successful.
OR
If the Call Alert acknowledgement is not received, a tone sounds and the display shows Call Alert Failed.

■ Text Messaging

NOTE: Press  at any time to return to the previous screen or long press  to return to the Home screen.

Writing and Sending a Text Message

The maximum length of characters for a text message is 140.

Procedure:

Press the preprogrammed **Text Messaging** button and proceed to step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2 ◀ or ▶ to Messages and press  to select.
- 3 ◀ or ▶ to Write and press  to select.
- 4 Use the keypad to type your message.
Press ◀ to move one space to the left.
Press ▶ or the # key to move one space to the right.
Press the * key to delete any unwanted characters.

- 5 Press  once message is composed.
- 6 ◀ or ▶ to the required subscriber alias or ID and press  to select.
OR
◀ or ▶ to Manual Dial and press  to select.
Key in the subscriber ID and press .
- 7 The display shows Text Message: <Subscriber Alias or ID>, confirming your message is being sent.
- 8 If the message is sent, a tone sounds and the display shows Message Sent.
OR
If the message is not sent, the display shows Message Sent Failed.

Only applicable when sending to subscriber aliases or IDs:

If the target radio successfully receives the Quick Text message, a tone sounds and the display shows Message Ack Rcvd.

OR

If the target radio fails to receive the Quick Text message, a tone sounds and the display shows Message Ack Failed.

Replying to Text Messages from the Inbox

Procedure:

Press the preprogrammed **Text Messaging** button and proceed to step 3.

OR

Follow the procedure below.

- 1  to access the menu.

- 2 ◀ or ▶ to **Messages** and press  to select.

- 3 ◀ or ▶ to **Inbox** and press  to select.

- 4 ◀ or ▶ to the required message and press  to select.

- 5 Press  once more to access additional options.

- 6 ◀ or ▶ to **Reply** and press  to select.

- 7 ◀ or ▶ to **Write** and press  to select.
 A blinking cursor appears. Use the keypad to type your message.
 Press ◀ to move one space to the left.
 Press ▶ or the # key to move one space to the right.
 Press the * key to delete any unwanted characters.

- 8 Press  once message is composed.

- 9 The display shows **Text Message: <Group/Subscriber Alias or ID>**, confirming your message is being sent.

- 10 If the message is sent, a tone sounds and the display shows **Message Sent**.
OR
 If the message is not sent, a tone sounds and the display shows **Message Sent Failed**.

Only applicable when sending to subscriber aliases or IDs:

*If the target radio successfully receives the Quick Text message, a tone sounds and the display shows **Message Ack Rcvd**.*

OR

*If the target radio fails to receive the Quick Text message, a tone sounds and the display shows **Message Ack Failed**.*

Editing a Quick Text Message

Procedure:

Press the preprogrammed **Text Messaging** button and proceed to step 3.

OR

Follow the procedure below.

- 1  to access the menu.

- 2 ◀ or ▶ to Messages and press  to select.

- 3 ◀ or ▶ to Quick Text and press  to select.

- 4 ◀ or ▶ to the required Quick Text and press  to select.

- 5 A blinking cursor appears. Use the keypad to edit the message.
Press ◀ to move one space to the left.
Press ▶ or the # key to move one space to the right.
Press the * key to delete any unwanted characters.

- 6 Press  once message is composed.

- 7 ◀ or ▶ to the required subscriber alias or ID and press  to select.

- OR**
◀ or ▶ to Manual Dial and press  to select.
Key in the subscriber ID and press .

- 8 The display shows Text Message: <Subscriber Alias or ID>, confirming your message is being sent.

- 9 If the message is sent, a tone sounds and the display shows Message Sent.
OR
If the message is not sent, a tone sounds and the display shows Message Sent Failed.

Only applicable when sending to subscriber aliases or IDs:

If the target radio successfully receives the Quick Text message, a tone sounds and the display shows Message Ack Rcvd.

OR

If the target radio fails to receive the Quick Text message, a tone sounds and the display shows Message Ack Failed.

NOTE: You will not be able to save modified preprogrammed messages.

■ Security

Radio Disable via Manual Dial

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to **Contacts** and press  to select. The entries are alphabetically sorted.
- 3 ◀ or ▶ to **Manual Dial** and press  to select.
Key in the subscriber ID and press .
- 4 ◀ or ▶ to **Radio Disable** and press  to select. The green LED blinks.
- 5 The display shows **Radio Disable: <Subscriber ID>** and the green LED lights up.
- 6 Wait for acknowledgment.
- 7 If successful, a tone sounds and the display shows **Radio Disable Successful**.
OR
If not successful, a tone sounds and the display shows **Radio Disable Failed**.

Do not press  during the Radio Disable operation as you will not get an acknowledgement message.

Radio Enable via Manual Dial

Procedure:

- 1  to access the menu.
- 2 ◀ or ▶ to **Contacts** and press  to select. The entries are alphabetically sorted.
- 3 ◀ or ▶ to **Manual Dial** and press  to select.
Key in the subscriber ID and press .
- 4 ◀ or ▶ to **Radio Enable** and press  to select. The green LED blinks.
- 5 The display shows **Radio Enable: <Subscriber ID>** and the green LED lights up.
- 6 Wait for acknowledgment.
- 7 If successful, a tone sounds and the display shows **Radio Enable Successful**.
OR
If not successful, a tone sounds and the display shows **Radio Enable Failed**.

Do not press  during the Radio Enable operation as you will not get an acknowledgement message.

Accessories

Your radio is compatible with the accessories listed in this chapter. Contact your dealer for details.

Antennas	page 54
Audio	page 55
Cables	page 55
Desktop Accessories	page 55
Mounting Kits	page 56
Speakers	page 56
Miscellaneous Accessories	page 56

■ Antennas

- VHF, 136 – 144 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (HAD4006_)
- VHF, 146 – 150.8 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (HAD4007_)
- VHF, 150.8 – 162 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (HAD4008_)
- VHF, 162 – 174 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (HAD4009_)
- VHF, 146 – 172 MHz, 3.0 dB Gain, Through-Hole Mount, Mini-U (HAD4014_)

- UHF, 403 – 430 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (HAE4002_)
- UHF, 450 – 470 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (HAE4003_)
- UHF, 406 – 420 MHz, 3.5 dB Gain, Through-Hole Mount, Mini-U (HAE4010_)
- UHF, 450 – 470 MHz, 3.5 dB Gain, Through-Hole Mount, Mini-U (HAE4011_)
- UHF, 450 – 470 MHz, 5.0 dB Gain, Through-Hole Mount, Mini-U (RAE4004_)

For XPR 4550 GPS Models Only

- Combination GPS/VHF, 136 – 144 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (RAD4214_)
- Combination GPS/VHF, 146 – 150.8 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (RAD4215_)
- Combination GPS/VHF, 150.8 – 162 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (RAD4216_)
- Combination GPS/VHF, 162 – 174 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (RAD4217_)
- Combination GPS/VHF, 146 – 172 MHz, 3.0 dB Gain, Through-Hole Mount, Mini-U (RAD4218_)
- Combination GPS/UHF, 403 – 430 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (PMAE4030_)

- Combination GPS/UHF, 450 – 470 MHz, 1/4 Wave, Through-Hole Mount, Mini-U (PMAE4031_)
- Combination GPS/UHF, 406 – 420 MHz, 3.5 dB Gain, Through-Hole Mount, Mini-U (PMAE4032_)
- Combination GPS/UHF, 450 – 470 MHz, 3.5 dB Gain, Through-Hole Mount, Mini-U (PMAE4033_)
- Combination GPS/UHF, 450 – 470 MHz, 5.0 dB Gain, Through-Hole Mount, Mini-U (PMAE4034_)
- Fixed Mount GPS Active Antenna (PMAN4000_)
- Window Mount GPS Active Antenna (PMAN4001_)
- Magnetic Mount GPS Active Antenna (PMAN4002_)

■ Audio

- Telephone Style Handset (HMN4098_)
- Desktop Microphone (RMN5050_)
- Compact Microphone (RMN5052_)
- Heavy Duty Microphone with Enhanced Audio (RMN5053_)
- Visor Microphone with Enhanced Audio (RMN5054_)
- Keypad Microphone with Enhanced Audio (RMN5065_)

■ Cables

- Power Cable to Battery, 10-foot Cable, 15 amp (HKN4137_)
- Power Cable to Battery, 20-foot Cable, 20 amp (HKN4192_)
- Mobile and Repeater Rear Accessory Connector Universal Cable (PMKN4018_)
- Ignition Sense Cable (RKN4136_)

■ Desktop Accessories

- Radio Power Cable for GPN6145 (GKN6266_)
- Desktop Tray without Speaker (GLN7318_)
- Desktop Tray with Speaker (RSN4005_)
- Switchmode Power Supply (1 – 25 Watt Models) (CE marked) (GPN6145_)
- Mobile Mini-U Antenna Adapter, 8-foot Cable (HKN9088_)
- Power Supply and Cable (25 – 60 Watt Models) (HPN4007_)
- Power Supply and Cable (1 – 25 Watt Models) (HPN4008_)
- Hardware Kit for Rear Accessory Connector (PMLN5072_)

■ Mounting Kits

- In Dash (DIN) Mounting Kit (RLN5933_)
- Low Profile Trunnion Kit (RLN6077_)
- High Profile Trunnion Kit (RLN6078_)
- Key Lock Trunnion Kit (RLN6079_)

■ Speakers

- 13-Watt External Speaker (RSN4002_)
- 7.5-Watt External Speaker (RSN4003_)
- 5-Watt External Speaker (RSN4004_)

■ Miscellaneous Accessories

- Display Mobile Button Kit (Includes Buttons for Monitor, Scan, Backlight, Emergency, Talkaround, Text Message, and Contacts) (HKLN4291_)
- Mobile Button Kit (Includes Buttons for Remote Monitor, Radio Check, Radio Disable, and VOX) (HKLN4292_)
- PL259/Mini-U Antenna Adapter, 8-foot Cable (HKN9557_)
- Microphone Hang Up Clip (All Microphones) (HLN9073_)
- Universal Microphone Hang Up Clip (All Microphones) (HLN9414_)
- Push Button PTT (RLN5926_)
- Emergency Footswitch (RLN5929_)

Limited Warranty

MOTOROLA COMMUNICATION PRODUCTS

I. WHAT THIS WARRANTY COVERS AND FOR HOW LONG:

MOTOROLA INC. ("MOTOROLA") warrants the MOTOROLA manufactured Communication Products listed below ("Product") against defects in material and workmanship under normal use and service for a period of time from the date of purchase as scheduled below:

XPR Series Digital Mobile Radios	Two (2) Years
Product Accessories	One (1) Year

MOTOROLA, at its option, will at no charge either repair the Product (with new or reconditioned parts), replace it (with a new or reconditioned Product), or refund the purchase price of the Product during the warranty period provided it is returned in accordance with the terms of this warranty. Replaced parts or boards are warranted for the balance of the original applicable warranty period. All replaced parts of Product shall become the property of MOTOROLA.

This express limited warranty is extended by MOTOROLA to the original end user purchaser only and is not assignable or transferable to any other party. This is the complete warranty for the Product manufactured by MOTOROLA. MOTOROLA assumes no

obligations or liability for additions or modifications to this warranty unless made in writing and signed by an officer of MOTOROLA.

Unless made in a separate agreement between MOTOROLA and the original end user purchaser, MOTOROLA does not warrant the installation, maintenance or service of the Product.

MOTOROLA cannot be responsible in any way for any ancillary equipment not furnished by MOTOROLA which is attached to or used in connection with the Product, or for operation of the Product with any ancillary equipment, and all such equipment is expressly excluded from this warranty. Because each system which may use the Product is unique, MOTOROLA disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

II. GENERAL PROVISIONS:

This warranty sets forth the full extent of MOTOROLA'S responsibilities regarding the Product. Repair, replacement or refund of the purchase price, at MOTOROLA'S option, is the exclusive remedy. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER EXPRESS WARRANTIES. IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY. IN NO EVENT SHALL MOTOROLA BE LIABLE FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT, FOR ANY LOSS OF USE, LOSS OF TIME, INCONVENIENCE, COMMERCIAL LOSS, LOST PROFITS OR SAVINGS OR OTHER INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR

INABILITY TO USE SUCH PRODUCT, TO THE FULL EXTENT SUCH MAY BE DISCLAIMED BY LAW.

III. STATE LAW RIGHTS:

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION OR EXCLUSIONS MAY NOT APPLY.

This warranty gives specific legal rights, and there may be other rights which may vary from state to state.

IV. HOW TO GET WARRANTY SERVICE:

You must provide proof of purchase (bearing the date of purchase and Product item serial number) in order to receive warranty service and, also, deliver or send the Product item, transportation and insurance prepaid, to an authorized warranty service location. Warranty service will be provided by MOTOROLA through one of its authorized warranty service locations. If you first contact the company which sold you the Product (e.g., dealer or communication service provider), it can facilitate your obtaining warranty service. You can also call MOTOROLA at 1-800-927-2744 US/Canada.

V. WHAT THIS WARRANTY DOES NOT COVER:

- A) Defects or damage resulting from use of the Product in other than its normal and customary manner.
- B) Defects or damage from misuse, accident, water, or neglect.

- C) Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment.
- D) Breakage or damage to antennas unless caused directly by defects in material workmanship.
- E) A Product subjected to unauthorized Product modifications, disassembles or repairs (including, without limitation, the addition to the Product of non-MOTOROLA supplied equipment) which adversely affect performance of the Product or interfere with MOTOROLA's normal warranty inspection and testing of the Product to verify any warranty claim.
- F) Product which has had the serial number removed or made illegible.
- G) Rechargeable batteries if:
 - (1) any of the seals on the battery enclosure of cells are broken or show evidence of tampering.
 - (2) the damage or defect is caused by charging or using the battery in equipment or service other than the Product for which it is specified.
- H) Freight costs to the repair depot.
- I) A Product which, due to illegal or unauthorized alteration of the software/firmware in the Product, does not function in accordance with MOTOROLA's published specifications or the FCC type acceptance labeling in effect for the Product at the time the Product was initially distributed from MOTOROLA.
- J) Scratches or other cosmetic damage to Product surfaces that does not affect the operation of the Product.
- K) Normal and customary wear and tear.

VI. PATENT AND SOFTWARE PROVISIONS:

MOTOROLA will defend, at its own expense, any suit brought against the end user purchaser to the extent that it is based on a claim that the Product or parts infringe a United States patent, and MOTOROLA will pay those costs and damages finally awarded against the end user purchaser in any such suit which are attributable to any such claim, but such defense and payments are conditioned on the following:

- A) that MOTOROLA will be notified promptly in writing by such purchaser of any notice of such claim;
- B) that MOTOROLA will have sole control of the defense of such suit and all negotiations for its settlement or compromise; and
- C) should the Product or parts become, or in MOTOROLA's opinion be likely to become, the subject of a claim of infringement of a United States patent, that such purchaser will permit MOTOROLA, at its option and expense, either to procure for such purchaser the right to continue using the Product or parts or to replace or modify the same so that it becomes non-infringing or to grant such purchaser a credit for the Product or parts as depreciated and accept its return. The depreciation will be an equal amount per year over the lifetime of the Product or parts as established by MOTOROLA.

MOTOROLA will have no liability with respect to any claim of patent infringement which is based upon the combination of the Product or parts furnished hereunder with software, apparatus or devices not furnished by MOTOROLA, nor will MOTOROLA have any liability for the use of ancillary equipment or software not furnished by MOTOROLA which is attached to or used in connection with the Product. The foregoing states the entire liability of MOTOROLA with respect to infringement of patents by the Product or any parts thereof.

Laws in the United States and other countries preserve for MOTOROLA certain exclusive rights for copyrighted MOTOROLA software such as the exclusive rights to reproduce in copies and distribute copies of such MOTOROLA software. MOTOROLA software may be used in only the Product in which the software was originally embodied and such software in such Product may not be replaced, copied, distributed, modified in any way, or used to produce any derivative thereof. No other use including, without limitation, alteration, modification, reproduction, distribution, or reverse engineering of such MOTOROLA software or exercise of rights in such MOTOROLA software is permitted. No license is granted by implication, estoppel or otherwise under MOTOROLA patent rights or copyrights.

VII. GOVERNING LAW:

This Warranty is governed by the laws of the State of Illinois, U.S.A.

Notes

Notes

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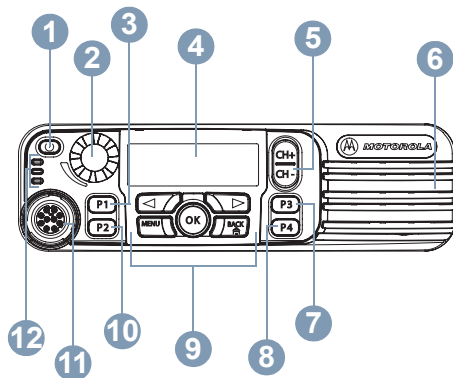
English



XPR Series Digital Mobile Radios

Quick Reference Card

Radio Controls

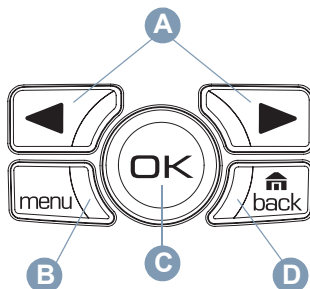


Record your radio's programmable button functions in the blanks provided. **SP** represents Short Press, **LP** represents Long Press.

- 1 On/Off Button
- 2 Volume Knob
- 3 Front Button P1 (Programmable)
SP: _____ LP: _____

- 4 Display
- 5 Channel Rocker
- 6 Speaker
- 7 Front Button P3 (Programmable)
SP: _____ LP: _____
- 8 Front Button P4 (Programmable)
SP: _____ LP: _____
- 9 Menu Navigation Buttons
- 10 Front Button P2 (Programmable)
SP: _____ LP: _____
- 11 Accessory Connector
- 12 LED Indicators

Menu Navigation Buttons



- A Left/Right Navigation Buttons
- B Menu Button
- C OK Button
- D Back/Home Button

Display Icons

The following are the icons that appear on the radio's display.

 The number of bars displayed represents the radio signal strength. Four bars indicates the strongest signal. This icon is only displayed while receiving.

 Radio is currently set at Low Power (L) or High Power (H).

 Radio is in Emergency mode.

 Selected channel is being monitored.

 Scan feature is activated.

 Radio recognizes activity on the channel/group designated as Priority 1 (if • is blinking) or as Priority 2 (if • is steady). 





In the absence of a repeater, radio is currently configured for direct radio to radio communication.



Unread message in the Inbox.



User's Inbox is full.



Tones are set off.



The GPS feature is enabled. The icon stays lit when a position fix is available.



The GPS feature is enabled but is not receiving data from the satellite.

■ Call Icons

The following icons appear on the radio's display during a call. These icons also appear in the Contacts list to indicate ID type.



Indicates a Private Call in progress. In Contacts list, it indicates a subscriber alias or ID.



Indicates a Group Call or All Call in progress. In Contacts list, it indicates a group alias or ID.

■ LED Indicators

Blinking red – Radio is receiving an Emergency transmission or has failed the self-test upon powering up.

Solid yellow – Radio is receiving a request for a Private Call, or monitoring a channel.

Blinking yellow – Radio is scanning for activity or receiving a Call Alert.

Solid green – Radio is transmitting.

Blinking green – Radio is powering up or receiving a call.

■ Powering the Radio On or Off

Press the On/Off Button briefly to turn on the radio, and press and hold the On/Off Button to turn it off.

■ Adjusting the Volume

Turn the Volume Knob clockwise to increase volume or counterclockwise to decrease volume.

■ Selecting a Zone

Press the preprogrammed **Zone** button and proceed to step 3.

OR

Follow the procedure below.

- 1  to access the menu.
- 2 ◀ or ▶ to **Zone** and press  to select.
- 3 The current zone is displayed and indicated by a ✓.
- 4 ◀ or ▶ to the required zone and press  to select.

- 5 The display shows <Zone> Selected momentarily and returns to the selected zone screen.

■ Selecting a Radio Channel, Subscriber ID, or Group ID

- 1 Press the On/Off Button.
- 2 Press the Channel Rocker to select the required channel, subscriber ID, or group ID.

■ Making a Group Call

Press the preprogrammed **One Touch Call** button and proceed to step 2.

OR

Follow the procedure below.

- 1 Press the Channel Rocker to select the channel with the active group alias or ID.
OR
 to access the menu.
◀ or ▶ to **Contacts** and press  to select.
◀ or ▶ to the ID you want to call and press  to select.
- 2 Press the **PTT** button to make the call. The green LED lights up. The display shows the group alias or ID, and the Group Call icon.
- 3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

4 Release the **PTT** button to listen.

5 When the target radio responds, the green LED blinks. You see the Group Call icon, the group ID, and target radio ID on your display.

6 If there is no voice activity for a preprogrammed period of time, the call ends.

To make a call to a group of users, your radio must be configured as part of that group.

■ Making a Private Call

Press the preprogrammed **One Touch Call** button and proceed to step 2.

OR

Follow the procedure below.

1 Press the Channel Rocker to select the channel with the active subscriber alias or ID.

OR

 to access the menu.

◀ or ▶ to **Contacts** and press  to select.

◀ or ▶ to the ID you want to call and press  to select.

2 Press the **PTT** button to make the call. The green LED lights up. The first line displays the target radio's ID. The second line displays **Private Call** and the Private Call icon.

3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

4 Release the **PTT** button to listen.

5 If there is no voice activity for a preprogrammed period of time, the call ends.

6 You hear a short tone. The display shows **Call Ended**.

■ Making an All Call

Your radio must be programmed to allow you to use this feature. Users on the channel cannot respond to an All Call.

1 Press the Channel Rocker to select the channel with the active All Call group alias or ID.

2 Press the **PTT** button to make the call. The green LED lights up. The display shows the All Call group alias or ID, and the All Call icon

3 Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

4 If there is no voice activity for a preprogrammed period of time, the call ends.

*When you **receive** an All Call, a message appears and remains on your radio's display until the call ends. You will not be able to continue with any menu navigation or editing until the call ends.*

Once the All Call ends, the radio returns to the menu prior to receiving the call.

■ Scanning Channels

Press the preprogrammed **Scan** button to turn scan on or off.

OR

Follow the procedure below.

1  to access the menu.

2 ◀ or ▶ to **Scan** and press  to select.

3 You see **Scan On** or **Scan Off** depending on previous selection.

During scan, the yellow LED blinks and the scan icon is displayed.

■ Sending a Call Alert

Press the preprogrammed **One Touch Call** button and proceed to step 5.

OR

Follow the procedure below.

1  to access the menu.

2 ◀ or ▶ to **Contacts**. Press  to select.

3 ◀ or ▶ to the required subscriber alias or ID and press  to select.

4 ◀ or ▶ to **Call Alert** and press  to select.

5 The display shows **Call Alert!**
<Subscriber Alias or ID>. The green LED lights up.

- 6 If the Call Alert acknowledgement is received, a tone sounds and the display shows **Call Alert Successful**.

OR

If the Call Alert acknowledgement is not received, a tone sounds and the display shows **Call Alert Failed**.

■ Sending a Quick Text Message

Press the preprogrammed **Text Messaging** button and proceed to step 3.

OR

Press the preprogrammed **One Touch Call** button to send a predefined Quick Text message to a predefined alias or ID and proceed to step 6.

OR

Follow the procedure below.

- 1  to access the menu.

- 2 ◀ or ▶ to **Messages** and press  to select.

- 3 ◀ or ▶ to **Quick Text** and press  to select.

- 4 ◀ or ▶ to the required Quick Text and press  to select.

- 5 ◀ or ▶ to the required alias or ID and press  to select.

- 6 The display shows **Text Message: <Group/Subscriber Alias or ID>**.

- 7 If the message is sent successfully, a tone sounds and the display shows **Message Sent**.

OR

If the message cannot be sent, the display shows **Message Sent Failed**.

■ Replying to a Text Message with

Quick Text from the Inbox

Press the preprogrammed **Text Messaging** button and proceed to step 2.

OR

Follow the procedure below.

- 1  to access the menu.

- 2 ◀ or ▶ to **Messages** and press  to select.

- 3 ◀ or ▶ to **Inbox**. Press  to select.

- 4 ◀ or ▶ to the required message and press  to select.

- 5 Press  once more to access the sub-menu.

- 6 ◀ or ▶ to **Reply** and press  to select.

- 7 ◀ or ▶ to **Quick Text** and press  to select.

- 8 Press  once more to send the reply.

- 9 The display shows **Text Message: <Group/Subscriber Alias or ID>**.

- 10 If the message is sent successfully, a tone sounds. The display shows **Message Sent**.

OR

If the message cannot be sent, the display shows **Message Sent Failed**.

■ Sending an Emergency Alarm

- 1 Press the preprogrammed **Emergency** button or the **Emergency** footswitch.

- 2 The display shows **Sending Alarm**, which alternates with your radio ID. The green LED lights up and the Emergency icon appears on the Home screen display.

- 3 When an Emergency Alarm acknowledgment is received, the Emergency tone sounds and the green LED blinks. The display shows **Emergency Alarm Successful**.

OR

If your radio does not receive an Emergency Alarm acknowledgement, and after all retries have been exhausted, a tone sounds and the display shows **Emergency Alarm Failed**.

- 4 Radio exits the Emergency Alarm mode and returns to the Home screen.



MOTOROLA

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